



## Complete Summary

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### TITLE

Heart failure in adults: percentage of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that LVS function was evaluated before arrival, during hospitalization, or is planned for after discharge.

### SOURCE(S)

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

## Measure Domain

### PRIMARY MEASURE DOMAIN

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

### SECONDARY MEASURE DOMAIN

Does not apply to this measure

## Brief Abstract

### DESCRIPTION

This measure is used to assess the percentage of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that left ventricular systolic function (LVS) was evaluated before arrival, during hospitalization, or is planned for after discharge.

### RATIONALE

The priority aim addressed by this measure is to improve the use of diagnostic testing in order to identify and then appropriately treat adult patients with heart failure.

### PRIMARY CLINICAL COMPONENT

Heart failure; left ventricular systolic function; two-dimensional echocardiogram; Doppler flow studies; radionuclide ventriculography

#### **DENOMINATOR DESCRIPTION**

Number of adult patients with a primary diagnosis of heart failure (see the related "Denominator Inclusions/Exclusions" field in the Complete Summary)

#### **NUMERATOR DESCRIPTION**

Number of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that left ventricular systolic function (LVS) was evaluated before arrival, during hospitalization, or is planned for after discharge (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

### **Evidence Supporting the Measure**

#### **EVIDENCE SUPPORTING THE CRITERION OF QUALITY**

- A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

#### **NATIONAL GUIDELINE CLEARINGHOUSE LINK**

- [Heart failure in adults.](#)

### **Evidence Supporting Need for the Measure**

#### **NEED FOR THE MEASURE**

Unspecified

### **State of Use of the Measure**

#### **STATE OF USE**

Current routine use

#### **CURRENT USE**

Internal quality improvement

### **Application of Measure in its Current Use**

#### **CARE SETTING**

Hospitals

## **PROFESSIONALS RESPONSIBLE FOR HEALTH CARE**

Physicians

## **LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED**

Group Clinical Practices

## **TARGET POPULATION AGE**

Age greater than or equal to 18 years

## **TARGET POPULATION GENDER**

Either male or female

## **STRATIFICATION BY VULNERABLE POPULATIONS**

Unspecified

### **Characteristics of the Primary Clinical Component**

## **INCIDENCE/PREVALENCE**

Heart failure is a major health problem in the United States, and the incidence of the disease is projected to increase. It was the most frequent diagnosis of Medicare patients discharged from the hospital in 2001. There are an estimated 5 million individuals currently diagnosed with heart failure, 550,000 new cases diagnosed annually, and 1 million people hospitalized annually (including readmission rates of 30 to 60%).

## **EVIDENCE FOR INCIDENCE/PREVALENCE**

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

## **ASSOCIATION WITH VULNERABLE POPULATIONS**

Unspecified

## **BURDEN OF ILLNESS**

There are over 260,000 annual deaths from heart failure. From 1979 to 2000 heart failure death rates have increased 148% and hospital discharges have increased 165%. The prognosis of patients with a new diagnosis of heart failure is poor. Senni et al. (1998) noted survival to be 86% at 3 months, 76% at one year, and only 35% at 5 years.

## **EVIDENCE FOR BURDEN OF ILLNESS**

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

Senni M, Tribouilloy CM, Rodeheffer RJ, Jacobsen SJ, Evans JM, Bailey KR, Redfield MM. Congestive heart failure in the community: a study of all incident cases in Olmsted County, Minnesota, in 1991. *Circulation* 1998 Nov 24;98(21):2282-9. [PubMed](#)

## **UTILIZATION**

See the "Incidence/Prevalence" field.

## **COSTS**

Unspecified

### **Institute of Medicine National Healthcare Quality Report Categories**

## **IOM CARE NEED**

Living with Illness

## **IOM DOMAIN**

Effectiveness

### **Data Collection for the Measure**

## **CASE FINDING**

Users of care only

## **DESCRIPTION OF CASE FINDING**

Adult patients with a primary diagnosis of heart failure.

The period for assessment is during the hospital stay and at discharge. Monthly data will be submitted quarterly.

The minimum sample is 20 patients per month.

## **DENOMINATOR SAMPLING FRAME**

Patients associated with provider

## **DENOMINATOR INCLUSIONS/EXCLUSIONS**

**Inclusions**

Number of adult patients with a primary diagnosis of heart failure\*

\*International Classification of Diseases, Ninth Revision (ICD-9) codes: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9. (Refer to the table, "Descriptions of ICD-9 Codes," in the original measure documentation for code descriptions.)

**Exclusions**

- Patients who are less than 18 years of age
- Patients who died prior to discharge
- Patients who were transferred to another hospital
- Patients who left against medical advice
- Patients discharged to hospice
- Patients with reason(s) documented by a physician, nurse practitioner, or physician assistant for no left ventricular systolic function (LVS) evaluation

**RELATIONSHIP OF DENOMINATOR TO NUMERATOR**

All cases in the denominator are equally eligible to appear in the numerator

**DENOMINATOR (INDEX) EVENT**

Clinical Condition  
Institutionalization

**DENOMINATOR TIME WINDOW**

Time window brackets index event

**NUMERATOR INCLUSIONS/EXCLUSIONS****Inclusions**

Number of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that left ventricular systolic function (LVS)\* was evaluated before arrival, during hospitalization, or is planned for after discharge

\*The most useful evaluation of left ventricular systolic function is the comprehensive two-dimensional echocardiogram coupled with Doppler flow studies. Radionuclide ventriculography can also be performed to evaluate left ventricular ejection fraction and volume. Description of left ventricular systolic function may be quantitative (i.e., ejection fraction) or qualitative (e.g., "moderately depressed" or visually estimated ejection fraction).

**Exclusions**

Unspecified

**MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS**

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

#### **NUMERATOR TIME WINDOW**

Episode of care

#### **DATA SOURCE**

Administrative data  
Medical record

#### **LEVEL OF DETERMINATION OF QUALITY**

Individual Case

#### **PRE-EXISTING INSTRUMENT USED**

Unspecified

### **Computation of the Measure**

#### **SCORING**

Rate

#### **INTERPRETATION OF SCORE**

Better quality is associated with a higher score

#### **ALLOWANCE FOR PATIENT FACTORS**

Unspecified

#### **STANDARD OF COMPARISON**

Internal time comparison

### **Evaluation of Measure Properties**

#### **EXTENT OF MEASURE TESTING**

Unspecified

### **Identifying Information**

#### **ORIGINAL TITLE**

Percentage of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that left ventricular systolic function (LVS) was evaluated before arrival, during hospitalization, or is planned for after discharge.

## **MEASURE COLLECTION**

[Heart Failure in Adults Measures](#)

## **DEVELOPER**

Institute for Clinical Systems Improvement

## **ADAPTATION**

Measure was not adapted from another source.

## **RELEASE DATE**

2006 Aug

## **REVISION DATE**

2007 Aug

## **MEASURE STATUS**

This is the current release of the measure.

This measure updates a previous version: Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2006 Aug. 116 p.

## **SOURCE(S)**

Institute for Clinical Systems Improvement (ICSI). Heart failure in adults. Bloomington (MN): Institute for Clinical Systems Improvement (ICSI); 2007 Aug. 119 p. [217 references]

## **MEASURE AVAILABILITY**

The individual measure, "Percentage of adult patients with a primary diagnosis of heart failure with documentation in the hospital record that left ventricular systolic function (LVS) was evaluated before arrival, during hospitalization, or is planned for after discharge," is published in "Health Care Guideline: Heart Failure in Adults." This document is available from the [Institute for Clinical Systems Improvement \(ICSI\) Web site](#).

For more information, contact ICSI at, 8009 34th Avenue South, Suite 1200, Bloomington, MN 55425; phone: 952-814-7060; fax: 952-858-9675; Web site: [www.icsi.org](http://www.icsi.org); e-mail: [icsi.info@icsi.org](mailto:icsi.info@icsi.org).

## **NQMC STATUS**

This NQMC summary was completed by ECRI on November 14, 2006. This NQMC summary was updated by ECRI Institute on December 16, 2007.

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Date Modified: 11/3/2008

